

ABSTRACT

A hypodermic injection system with a retractable needle wherein the needle retracts within an interior cavity of a syringe plunger, such that the needle is confined within the plunger. A spring biases the needle rearwardly into the plunger, and a needle retainer releasably retains the needle against the bias of the spring. The plunger has a frangible end, which dissociates when the plunger engages the needle retainer, allowing the coiled spring to eject the needle into the interior cavity of the plunger. A body fluid sampling embodiment employs the same functional elements except the plunger is shorter and contains a linking that communicates with a vacuum container. The container allows fluid sampling and provides the structure to release the spring retracting the needle. The retractable needle embodiment is also employed with an insertion needle that guides a catheter tube below the skin of a patient and into the vein, and allows retraction of the insertion needle thereby avoiding accidental pricking of the health care worker by the insertion needle.

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